

REMARKS

This Amendment is submitted with a Request for Continuing Examination (RCE) and is in response to the final Office Action mailed on May 22, 2007 and the Advisory Action mailed on September 14, 2007, in which claims 1, 2, 4-12, 14, 16-20, and 22-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Van den Bergen et al. (U.S. Pat. No. 6,048,113); claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van den Bergen et al. in view of Priebe et al. (U.S. Pat. App. Pub. 2003/0075566); and claims 1 and 13 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 10/247,107 in view of Van den Bergen et al. With this Amendment, claims 1, 14, and 17 are amended. Claims 1-24 remain pending in the present application.

Claim Rejections

Claims 1, 2, 4-12, 14, 16-20, and 22-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Van den Bergen et al. In order to reject a claim under § 102(b), the reference must teach each and every limitation of the claims. MPEP 2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). With this Amendment, claims 1, 14, and 17 are amended to recite that the fluid return channel is formed on an exterior surface of the probe, and that recirculated fluid is returned to the fluid in the container substantially without turbulence. Support for the former amendments can be found in the specification at page 8, line 25 to page 9, line 3:

Fluid return channel 50 is preferably formed along an exterior of probe 46 and extends longitudinally along probe 46 generally parallel to fluid passage 52 extending between port adaptor 22 (which adapts to port 54) and lower probe port 48.

Support for the claim amendments reciting that fluid returned to the fluid in the container substantially without turbulence can be found in the specification at page 9, lines 4-14 and page 12, lines 15-23:

In operation of dispensing and recirculating system 10, recirculated fluid is returned to the interior of inner container 11 via fluid return channel 50. As the return fluid flow reaches fluid return channel 50, fluid trickles down fluid return channel 50 into the fluid contained within inner container 11. The return fluid flow is regulated such that the fluid trickling down fluid return channel 50 flows smoothly into the liquid in inner container 11. This is an improvement over some conventional fluid recirculation systems in which free space at the end of the return flow path allows the recirculated liquid to free-fall from the return flow path into the container, thereby causing **turbulence** in the fluid.

Amended claim 1 recites a liquid dispensing and recirculating system comprising a container, a connector including a probe having a flow passage therein, and a pump coupled with the probe for pumping fluid in the container through the probe. The system also includes “a fluid return channel extending longitudinally along and formed on an exterior surface of the probe adapted to return recirculated fluid to the fluid in the container substantially without turbulence and to permit air in the returned liquid to be released from the fluid return channel before reaching the fluid in the container to prevent injection of air into the fluid in the container.”

Amended claim 14 recites a probe for dispensing liquid from and returning liquid to a container comprising a flow passage, a fluid return port, and a fluid return channel in fluid communication with the fluid return port via a bore, the fluid return channel extending longitudinally along and formed on an exterior surface of the probe. The fluid return channel returns the liquid to liquid in the container substantially without turbulence and to permit air in the returned liquid to be released from the fluid return channel before reaching the liquid in the container to prevent injection of air into the liquid in the container.

Amended claim 17 recites a method of dispensing and recirculating liquids comprising coupling a connector including a probe that defines a fluid passage, and a fluid return channel extending longitudinally along and formed on an exterior surface of the probe, dispensing fluid from the container through the fluid passage, and refilling fluid into the container substantially without turbulence through the fluid return channel, wherein air in the refilled fluid is released from the fluid return channel before reaching the fluid in the container to prevent injection of air into the fluid in the container.

Van den Bergen et al. disclose a cap assembly 30 connected to a collapsible container 15 filled with process liquid (FIG. 1). Cap assembly 30 comprises a body 28 having a central portion 29, a head portion 31, and a tail portion 32. An outlet passage 55 passes through body 28 to enable process liquid to be withdrawn from storage container 15, and an inlet passage 54 passes through body 28 to enable process liquid to be returned to storage container 15. Col. 5, lines 10-13. Passages 54 and 55 also pass through tail portion 32. Col. 5, lines 13-14.

Van den Bergen et al. do not teach a return flow path that “extend[s] longitudinally along and [is] formed an exterior” of the cap assembly body, as is required by claims 1, 14, and 17. The Office Action refers to outlet passage 55 as teaching this claim limitation. However, as was set forth in the last filed Amendment, outlet passage 55 enables process liquid to be *withdrawn* from storage container 15. Col. 5, lines 10-12. This is evidenced by the arrow pointing upwardly into outlet passage 55 in FIG. 1. Inlet passage 54, which is the element in Van den Bergen et al. that actually returns liquid to container 15, passes through body 28 and tail portion 32 such that inlet passage 54 is completely contained within the assembly, not on the exterior surface. See, e.g., FIG. 1 and col. 5, lines 10-17. Thus, Van den Bergen et al. do not teach a return flow path that “extend[s] longitudinally along and [is] formed on an exterior surface of the probe,” as recited in claims 1, 14, and 17.

In addition, inlet passage 54 has an opening cross-section smaller than that of outlet passage 55, which enables the returning liquid to be pumped into container 15 at a linear speed higher than the linear speed with which it was withdrawn from container 15. Col. 5, lines 26-30. Such a speed difference sets up turbulence within the liquid in container 15, and pumps the returning liquid into container 15 at jet velocities, adding further to the turbulence within the liquid. Col. 5, lines 30-34. This achieves the stated goal of Van den Bergen et al., which is to assure the returned liquid is mixed with the liquid in container 15 so that the liquid withdrawn from container 15 is more representative of the bulk. Col. 5, lines 34-36. However, the turbulent return of fluid to container 15 induces the formation of air bubbles in the liquid. While the introduction of air bubbles may be inconsequential to the photographic sheet liquid in container 15 of Van den Bergen et al., many other

fluids are rendered defective or unusable by the presence of air bubbles. See, e.g., page 2, lines 8-9 of the present application. Thus, Van den Bergen et al. do not teach that inlet passage 54 refills fluid to storage container 15 “substantially without turbulence” as required by claims 1, 14, and 17. Therefore, the recited elements of claims 1, 14, and 17 are not disclosed by Van den Bergen et al., and the rejection of claims 1, 14, and 17 under 35 U.S.C. § 102(b) should be withdrawn.

Claims 2, 4-12, 16, 18-20, and 22-24 were also rejected under 35 U.S.C. § 102(b) as being anticipated by Van den Bergen et al. Claims 2 and 4-12 depend from claim 1, claim 16 depends from claim 14, and claims 18-20 and 22-24 depend from claim 17. As discussed above, claims 1, 14, and 17 are not anticipated or otherwise taught by Van den Bergen et al. Therefore, claims 2, 4-12, 16, 18-20, and 22-24 also are not anticipated or otherwise taught by Van den Bergen et al.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van den Bergen et al. in view of Priebe et al. As discussed above, claim 1 is in a condition for allowance. Claim 13 depends from allowable claim 1, and as such is allowable with its independent base claim. In addition, it is respectfully submitted that the combination of features recited in claim 13 is patentable on its own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See MPEP 2143.03, citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Double Patenting

Claims 1 and 13 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 10/247,107 in view of Van den Bergen et al. However, Van den Bergen et al. do not supply the deficiencies of Application No. 10/247,107. As described above, inlet passage 54, which is the element in Van den Bergen et al. that returns liquid to container 15, passes through body 28 and tail portion 32 such that inlet passage 54 is completely contained within the assembly. See, e.g., FIG. 1 and col. 5, lines 10-17. Van den Bergen et al. do not teach that inlet passage 54 “extend[s] longitudinally on an exterior of the probe” as is required by claim 1. In addition, Van den Bergen et

al. do not teach that inlet passage 54 refills fluid to storage container 15 “substantially without turbulence” as required by claim 1. Thus, claims 1 and 13 are not merely obvious variations of claims 1 and 8 of copending Application No. 10/247,107 in view of Van den Bergen et al., and the double patenting rejection on this basis should accordingly be withdrawn.

Withdrawn Claims

Claims 3, 15, and 21 were previously withdrawn from consideration as being drawn to a non-elected species. Claim 3 depends from allowable independent claim 1, claim 15 depends from allowable claim 14, and claim 21 depends from allowable claim 17. Thus, claim 3, 15, and 21 should also be considered and allowed, since they depend from an allowable generic independent claim. See MPEP 809.02 and 37 C.F.R. 1.146.

CONCLUSION

In view of the foregoing, it is believed that all claims in the present application are in condition for allowance. Reconsideration and allowance of claims 1, 2, 4-14, 16-20, and 22-24 are respectfully requested. In addition, claims 3, 15, and 21 should also be considered and allowed, since they depend from allowable generic independent claims 1, 14, and 17, respectively. A Notice of Allowance with respect to all claims 1-24 is respectfully requested.

Respectfully submitted,

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